

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4-6, 11-13, 16, 19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimatani et al (US 5,866,239).

Shimatani shows the glass ceramic plate for heating elements claimed including at least one enamel coating or paint provided substantially all of the upper surface of the plate, the enamel paint withstanding the temperature greater than 350 °C with a thickness .2-20 microns and having color pigments. Shimatani further shows that the glass ceramic has a composition having the claimed components including 60-75% silicon oxide, 15-25% aluminum oxide, and 2.5-5% lithium oxide; and the glass ceramic and the enamel are then subject to a ceramization heat-treatment. Also See column 5, lines 17-35. With respect to the recited L* and a* and b*, they are inherently met by Shimatani having the same structure as the recited glass having the same components as that of the claimed glass.

With respect to claim 11, the recited haze is a property of the claimed glass ceramic that is presumed inherent. It is noted that when the structure recited in the prior art is substantially identical to that of the claims, the claimed properties or functions are presumed to be inherent.

3. Claims 1, 4, 7, 8, 11, 16, 19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakamoto et al (US 5,691,254).

Art Unit: 3742

Sakamoto shows the glass ceramic plate claimed including a transparent or colored glass ceramic with an enamel coating or paint applied to a surface of the plate, the enamel coating withstanding the temperature greater than 350 °C, the enamel layer being between .2 to 20 microns, and the glass ceramic plate having the claimed composition including 60-75% silicon oxide, 15-25% aluminum oxide, and 2.5-5% lithium oxide exhibiting the claimed expansion coefficient. Also see column 3, line 65 to column 4, line 12. With respect to the recited L* and a* and b*, they are inherently met by Sakamoto having the same structure as the recited glass having the same components as that of the claimed glass.

With respect to claim 11, the recited haze is a property of the claimed glass ceramic that is presumed inherent. It is noted that when the structure recited in the prior art is substantially identical to that of the claims, the claimed properties or functions are presumed to be inherent.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3, 14, 17, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimatani et al (US 5,866,239) or Sakamoto et al (US 5,691,254) in view of Wennemann et al (US 7,009,150).

Shimatani or Sakamoto shows the glass-ceramic plate claimed except for a coat of paint on the lower surface of the plate.

Art Unit: 3742

Wennemann shows the glass ceramic claimed including a transparent glass ceramic plate with a full surface enamel coating or paint applied on the upper and lower sides of the plate.

Wennemann further shows that the coating or paint has the degradation temperature greater than 350 °C wherein the coating is capable of imparting white or milky glass ceramic meeting the claimed haze. The coating is heated at a temperature between 200-900 °C, preferably between 460-650 °C, which allows temperature variations, including by 10 to 60 °C. The coating also include additives including resins with a display such as LED-LCD devices provided on the surfaces of the plate and with heating elements provided under the plate.

In view of Wennemann, it would have been obvious to one of ordinary skill in the art to adapt Shimatani or Sakamoto with the coating or painted provided under or lower surface of the plate to enhance the appearance of the glass ceramic while withstanding a high heating temperature.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimatani et al (US 5,866,239) or Sakamoto et al (US 5,691,254) in view of Kornbluth (US 2,843,559) or Martin et al (US 2,866,720).

Shimatani or Sakamoto shows the glass ceramic plate claimed including the enamel coating except for silicone resin.

Kornbluth and Martin show that it is well known in the art that an enamel material contains silicone resin as the binder or vehicle solvent.

In view of Kornbluth or Martin, it would have been obvious to one of ordinary skill in the art to adapt Shimatani or Sakamoto with the enamel material provided with the silicone resin as

Art Unit: 3742

the binder or vehicle solvent to provide a vitreous layer that can be effectively adhered to a base surface including the glass ceramic.

7. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimatani et al (US 5,866,239) or Sakamoto et al (US 5,691,254) in view of Krause et al (US 6,914,223) or Poumey (US 4,833,288).

Shimatani or Sakamoto shows the glass ceramic plate claimed except the underlying induction heating elements.

Krause and Poumey show that it is well known in the art that the induction-heated cooking surfaces are provided with the transparent glass ceramic plates.

In view of Krause or Poumey, it would have been obvious to one of ordinary skill in the art to adapt Shimatani or Sakamoto with the induction heaters as another alternative heating means to provide with the cooking surface.

8. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimatani et al (US 5,866,239) or Sakamoto et al (US 5,691,254) in view of Mewissen (US 4,902,876).

Shimatani or Sakamoto shows the glass ceramic plate claimed except showing the plate being mounted to an insulating support.

Mewissen shows a glass ceramic plate being supported on an insulating support without an intermediate complex intended for masking the inside the device.

In view of Mewissen, it would have been obvious to one of ordinary skill in the art to adapt Shimatani or Sakamoto with an insulating support to allow the heating elements to better provide a more concentrated cooking surfaces on the glass ceramic plate without.

Response to Arguments

9. Applicant's arguments filed 5/9/08 have been fully considered but they are not persuasive.

The applicant arguments along with the declaration submitted by Mr. Vilato illustrate how similar compositions of glass ceramic products can have different L* values depending upon, particularly, the presence of the beta-spodumene phase. However, it is noted that such phase is not claimed, and there's no claimed structure to support such phase. The claimed structure of claim 1 remains to the same as that of the prior art, and the ground of rejections by the examiner is maintained.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Y. Paik whose telephone number is 571-272-4783. The examiner can normally be reached on M-F (6:30-3:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on 571-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3742

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sang Y Paik/

Primary Examiner, Art Unit 3742

syp